

Work Order ID 61044

August 4, 2010 2:33:04 PM



Page 1

Item ID: D206-642-441

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 8/04/10 Start Qty: 1.00



Cust Item ID:

Required Date: 8/16/10 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan: *H*

Date: *10-8-09*

Tooling:

Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D2650	Rev F
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100	0.00
-----	------

Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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100	0.00
-----	------

DC	0.00
----	------

Document Control	0.00
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DOCUMENT CONTROL

Memo

Photocopy bluefile and create labels per PPP D206-642-441 CHG002

*N/A* *DR*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start
	QC:	Date:	SPC (Y/N):	Date:	Stop	



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110 	Skidtubes	0.00							
Skidtubes	Memo	0.00							
Skidtubes	1-Deburr Fwd edge of tube								

2-Remove ridge on inside of Fwd edge of tubeas per Dwg D2650

3-Weld Fwd Cap as per Dwg D2650. Use aluminum rod. Grind D2647 to fit as required.

A/R  Aluminum Rod  ~~M112607/M114242~~

BE 10-8-10

4-Grind weld flush to cap on top surface only.

BE 10-8-10

5-Cut aft end 138.60" from front of tube

6-Drill pilot holes using drill jig DT8025 &amp; DT8169 (A,B,C,D). Open to Ø0.312".

7-Drill holes for wearplates using DT 8028-7. Open to Ø 0.297".

8-Open using #6 Drill Bit

9-Open holes for Tow Ring to Ø0.625" as per Dwg D2650, D2650-7 Drilling Detail

10-Remove inner indexing ridge on aft end of skidtubeas per Dwg D2650.

11-Deburr and Blow out all chips form inside the tube

10-8-11

W/O:		WORK ORDER CHANGES					
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	QC:	Date:	SPC (Y/N):	Date:	Stop	

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

115



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

S10864

0.00

116



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

S10864

0.00

120



HandFinish

Chemical Conversion Coat per QSI005 4.1

0.00

0.00

B 10-8-11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Reference:

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Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130



QC3- Inspect Part Finish

0.00

QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run

Start



QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

140



Skidtubes

0.00

Skidtubes

Memo

0.00

Skidtubes

1-Open holes to finished size as per Dwg D2650, D2650-7 Drilling Detail  
(without cutting fluid)

2-Countersink crossbolt spacer holes as per Dwg D2650 (without cutting fluid)

3-Deburr. Blow out chips. Grind alodine off around crossbolt spacer.

4-Bond D2654-7 web in place as per QSI 015 Ensure holes line up Allow 12 Hrs.  
cure time before cuttingStart Date: 10-8-12Time:  11:00 AMFinish Date: 10/8/16Time:  7:35 AMA/R  Sikaflex-291  11/15/14 Sikaflex expiry date:  11-7-30

 10-8-12

W/O:		WORK ORDER CHANGES					
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Reference:

Approvals: Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

150



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

8/10/08/16

(X)

160



Skidtubes

Skidtubes

0.00

Memo

0.00

1-Prep per QSI 005 and Insert cross bolt spacers D2649. Weld as per QSI 004 and Dwg D2650. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

A/R Aluminum Rod 11/12/2007BE 10/05/10  
DP 10-8-17

2-Grind welds flush as per Dwg D2650.

3-Counterbore 5/16" x 0.750" deep as per Dwg D2650 Deburr

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

170



HandFinishing

0.00

Skidtubes

Skidtubes

Memo

0.00

Install D2680-041 Nut Plate as per Dwg D2650

180



QC10- Inspect visual per QSI004- ground welds

0.00

QC

Quality Control

190



QC5- Inspect part completeness to step on W/O

0.00

QC

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_

Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

200



Pressure Wash per QSI005 4.3

0.00 *7/10/08/20**1/8*

HandFinish

Hand Finishing

Memo

Brush alodine tube on crossbolt spacer area, do not acid etch, do not dip tube in tank.

205



SprayPaint

Spray Painting

Memo

Spray paint Delfleet Blue  
Primer B 14424  
Delfleet Blue B 11317  
Clear delfleet B 15504

0.00

*ml 10 09 02 (1)*

206



QC

Quality Control

QC14- Inspect Spray Paint

0.00

Memo

0.00

*25 10-09-03 (1)*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

230



HandFinish

HandFinishing

0.00

→ JH

10/09/07

1

9

Hand Finishing

Memo

0.00

1-Install inserts & wearpads as per dwg D2922. Use a drop of Sikaflex inside  
insert holes before installing wearpad/wearplate.A/R  Sikaflex-291 114093 Sikaflex expiry date: 10/102-Install O-Rings D2651-3 on plugs D2651-1 with Petroleum Jelly and install  
plugs as per Dwg D2650. Clean excess adhesive

3-Install MS27039-4-06 Screw as per DEO 9153

4-Inspect for foreign object per QSI 024

5-Install D2646 Aft Cap and seal with SikaflexClean excess adhesive

A/R  Sikaflex-291 114093 Sikaflex expiry date: 10/106-Wing Walk as per Dwg D2650-7 and QSI 005 4.4Batch: 115 028

W/O:		WORK ORDER CHANGES					
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	QC:	Date:	SPC (Y/N):	Date:	Stop	



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240 QC5- Inspect part completeness to step on W/O

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

5109107

QC

Quality Control

250



Packaging

Packaging

0.00

Packaging

Memo

0.00

Identify and pack for shipping as per PPP D206-642-441

Location:

PPP Rev: PPP 61004

260



QC

QC21- Final Inspection - Work Order Release

0.00

Quality Control

Memo

0.00

W/O:		WORK ORDER CHANGES					
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# Picklist Print

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Parent Item: D206-642-441



Parent Item Name: Replacement Skidtube

Start Date: 8/04/10

Required Date: 8/16/10

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:H 05.10.11 Added D3429-1 per CHG002 KJ/CP/JLM

IPP Rev:I 08-05-01 add QC3 DD verified by:EC

IPP Rev:J 08-09-29 revF as per dwg DD verified by:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2620 		Manufactured	No		110	Each	8.0000	1	1			10-8-10	
Skidtube, 206 Skidtube				<u>Location</u> LG 57542	<u>Loc Qty</u> 1 8 8								
D2646 		Manufactured	No	110	Each	79.0000	1	1				10/09/07	
Aft Cap				<u>Location</u> FP-4 57332	<u>Loc Qty</u> 70 70								
				FP6 52663	9 9								X1
D2647 		Manufactured	No	140	Each	76.0000	1	1					
Cap				<u>Location</u> FP 55352	<u>Loc Qty</u> 76 76								
D2654-7 		Manufactured	No	160	Each	0.0000	1	1				8E 10-8-10	
Web				<u>Location</u> FP 55352	<u>Loc Qty</u> 76 76								

B61264

1

DP 10-8-12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Parent Item Name: Replacement Skidtube

Start Date: 8/04/10

Required Date: 8/16/10

Start Qty: 1.00

Required Qty: 1.00

CCR264SS3-3



Purchased No

170

Each

532.0000

2

2



Cherry Rivet

Location

ST311

Loc Qty

532

Loc Code

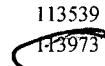


10-8-17

D2649



Manufactured No



170

Each

140.0000

23

23



Cross Bolt Spacer

Location

LG

Loc Qty

140

Loc Code

23 8E 10/03/10

D2680-041



Manufactured No

170

Each

39.0000

1

1



Nut Plate

Location

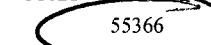
ST021

Loc Qty

39

Loc Code

10-8-17



55366

39

39



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Parent Item Name: Replacement Skidtube

Start Date: 8/04/10

Required Date: 8/16/10

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130

Purchased

No

230

Each

3,842.000

60

60

Insert

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
PKG11	3602	
114723	3602	y60
ST282	201	
110511	38	
114407	163	
ST381	39	
114654	39	

AN960JD10L

NAS1149D0332J Purchased

No

230

Each

2,635.000

62

62

Washer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST348	2635	
110985	2635	x62

AN960JD416

NAS1149D0463J Purchased

No

230

Each

0.0000

1

1

Washer

CR3212-4-03

Purchased

No

18115000

230

Each

1,926.000

2

2

Cherry Rivet

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST311	1926	
111359	5	
112314	2	
114436	448	
114450	89	
114859	1382	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

Page 4

August 4, 2010 2:33:08 PM

Work Order ID: 61044



Parent Item: D206-642-441



Parent Item Name: Replacement Skidtube

Start Date: 8/04/10

Required Date: 8/16/10

Start Qty: 1.00

Required Qty: 1.00

D2651-1



Manufactured No

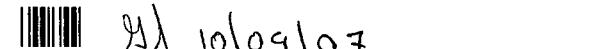
230

Each

748.0000

22

22



Plug

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	152	
51530	152	
fpa	596	
53349	411	X22
57869	185	

D2651-3



Manufactured No

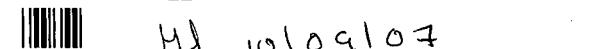
230

Each

356.0000

22

22



O-Ring

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	356	
46114	356	X22

D3535-15



Wearshoe

Manufactured No

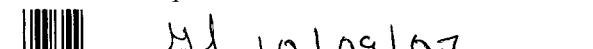
230

Each

10.0000

1

1



D3535-23



Wearshoe

Manufactured No

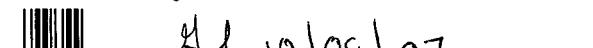
230

Each

1.0000

1

1



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP21	1	X1
57730	1	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

Page 5

August 4, 2010 2:33:08 PM

Work Order ID: 61044



Parent Item: D206-642-441



Parent Item Name: Replacement Skidtube

Start Date: 8/04/10

Required Date: 8/16/10

Start Qty: 1.00

Required Qty: 1.00

D3535-37



Manufactured No

230

Each

17.0000

1

1

SL 10109107

Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	17	
51654	4	
56101	13	

D3536-15



Manufactured No

230

Each

25.0000

1

1

SL 10109107

Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	18	
56055	6	
60875	12	
FP11	7	
59238	7	

D3536-23



Manufactured No

230

Each

14.0000

1

1

SL 10109107

Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP011	14	
58819	2	
60234	12	

D3536-37



Manufactured No

230

Each

15.0000

1

1

SL 10109107

Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	15	
56102	15	

August 4, 2010 2:33:08 PM

Shop Packet Print

Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

Page 6

August 4, 2010 2:33:08 PM

Work Order ID: 61044



Parent Item: D206-642-441



Parent Item Name: Replacement Skidtube

Start Date: 8/04/10

Required Date: 8/16/10

Start Qty: 1.00

Required Qty: 1.00

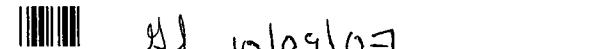
D3537-1



Manufactured No

230 Each 7.0000

6 6



Wearpad

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	1	341201
55465	1	
FP17	6	
57713	3	
59593	3	

x6

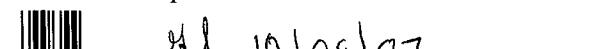
D3537-3



Manufactured No

230 Each 16.0000

1



Wearpad

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP19	16	
59711	16	

x1

MS27039-1-08



Purchased No

230 Each 1,763.000

2



Screw

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST291	1763	
110835	563	
114718	200	
115108	1000	

v2

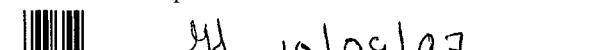
MS27039-4-06



Purchased No

230 Each 25.0000

1



Screw

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST292	25	
109061	25	

x1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

August 4, 2010 2:33:08 PM

Page 7

Work Order ID: 61044



Parent Item: D206-642-441



Parent Item Name: Replacement Skidtube

Start Date: 8/04/10

Required Date: 8/16/10

Start Qty: 1.00

Required Qty: 1.00

MS27039C1-08

Purchased

No

230

Each

1,058.000

60

60



10109107

SCREW

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	1000	
115336	1000	X60
ST293	58	
19185	58	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8 7 6 5 4 3 2 1

QTY -1	QTY -3	QTY -5	QTY -7	PART NUMBER	DESCRIPTION
X				D2650-1	SKIDTUBE ASSEMBLY
	X			D2650-3	SKIDTUBE ASSEMBLY
		X		D2650-5	SKIDTUBE ASSEMBLY
			X	D2650-7	SKIDTUBE ASSEMBLY
1	1	1	1	D2600-1-160	EXTRUSION
1				D2654-1	WEB
1				D2654-3	WEB
	1			D2654-5	WEB
		1		D2654-7	WEB
1	1	1	1	D2646	AFT CAP
1	1	1	1	D2647	CAP
17	18	19	23	D2649	CROSS BOLT SPACER
16	18	14	22	D2651-1	PLUG
16	18	14	22	D2651-3	O-RING
1	1	1	1	D2680-041	NUT PLATE
2	2			D3286-1	DOUBLER
2	2			D3286-3	STUD
42	44	54	60	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, ALS7-1032-130)
2	2	2	2	AN960JD10L	WASHER
2	2	2	2	CCR264SS3-3	RIVET
2	2	2	2	CR3212-4-03	RIVET
2	2	2	2	MS27039-1-08	SCREW
1	1	1	1	MS27039-4-06	SCREW
1	1	1	1	AN960JD416	WASHER
52	52			CR3212-4-04	RIVET

F

SHOP DRAWING  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER

NO. 01044  
08/10-8-04

RELEASED  
08-17-23

F

## NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3  
-BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: NONE

7) WEIGHT: N/A

8) WELD PER DART QSI 004

9) DAMAGE TOLERANCE ON FWD BEND:

THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.

10) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015

11) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)

12) DRILL Ø.297 FOR ALS7-1032-130 INSERTS USING TEMPLATE DT8056-1 ON -1 TUBE, DT8056-3 ON -3 TUBE, DT8056-5 ON -5 TUBE, AND DT8056-7 ON -7 TUBE. INSTALL INSERTS AFTER FINISH.

13) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

F	DRAWING UPDATED TO CURRENT STANDARDS. SHT 6 ADDED. ALL SECTION AND DETAIL VIEWS TRANSFERRED TO SHT 6. SHT 1 IN PL PART D2649 QTY UPDATED. SHT 6 SECT C-C GRIND INSTRUCTIONS DELETED FROM NOTE 7 (SEE NCR 239).	AJS	08.08.08
E	RMOVE CBORE, CHG DRILL, ADD CHAMFER	CP	06.03.30
D	REDRAW; INCORP. DE09136/9153/9163 MOD GROUND HANDLING ON D2650-1/-3	CP	04.05.17
C	CHANGE HOLE PATTERN AND FRONT END	DS	97.10.29
B	AS MANUFACTURED CHANGES	DS	97.06.26
A	NEW ISSUE	DS	97.03.25
REV.	DESCRIPTION	BY	DATE
DESIGN	DS	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 1 OF 6
APPROVED		TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
DATE	08.08.08	COPYRIGHT © 1997 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY OTHER PURPOSE OR SHOWN TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC	

8 7 6 5 4 3 2 1

A

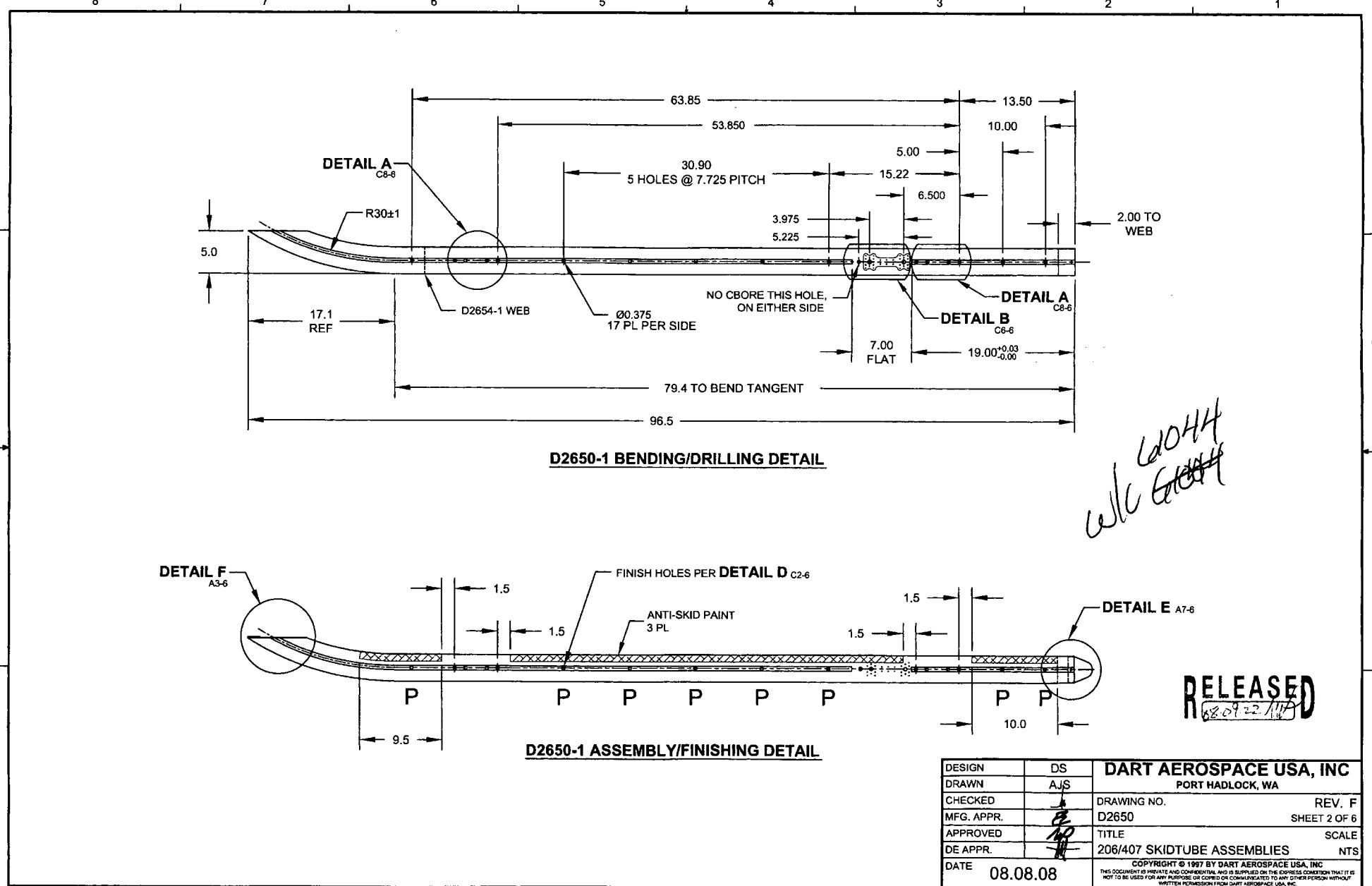
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



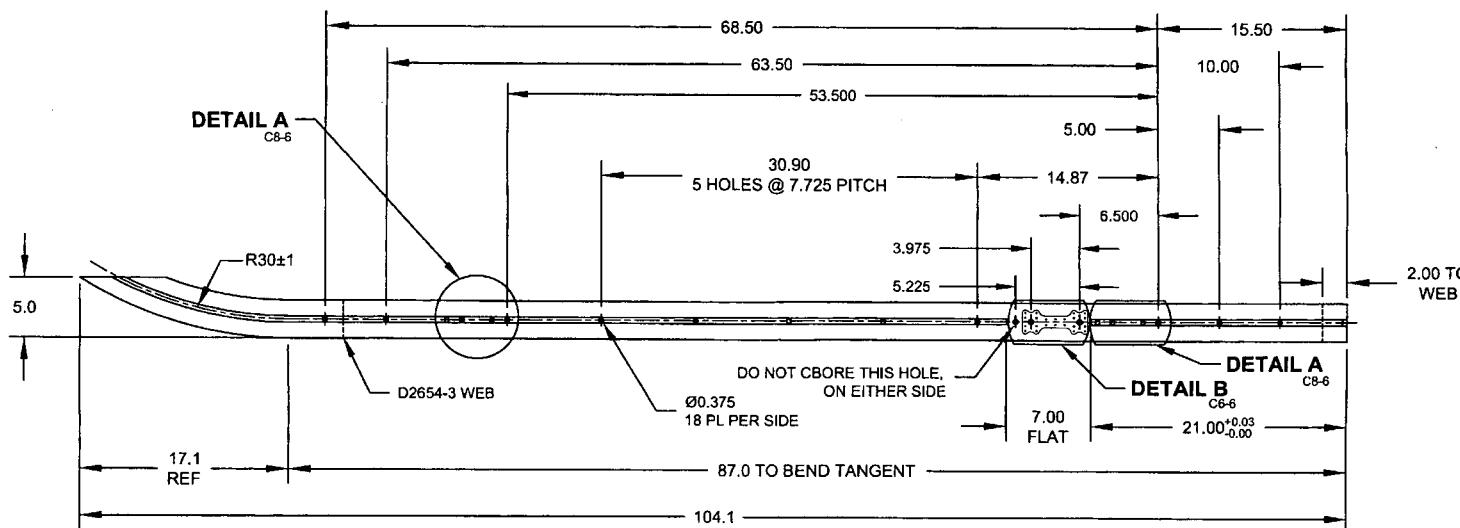
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

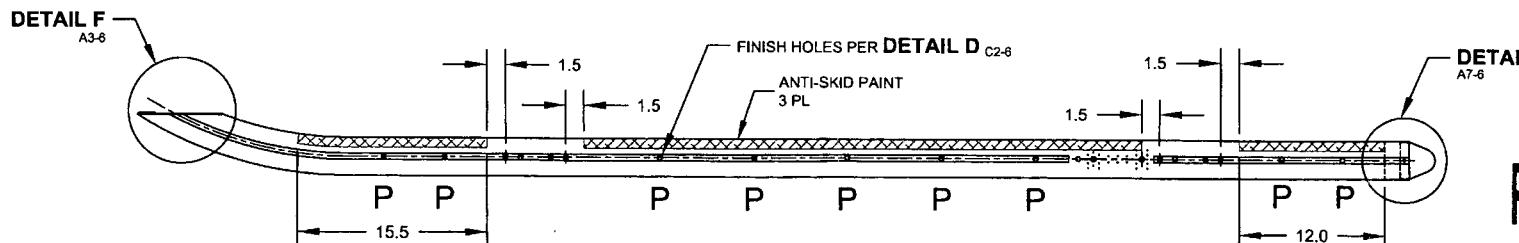
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



**D2650-3 BENDING/DRILLING DETAIL**

W10 61044



## **D2650-3 ASSEMBLY/FINISHING DETAIL**

RELEASED  
05-09-2022 11:00

DESIGN	DS	DART AEROSPACE USA, INC		
DRAWN	AJS	PORT HADLOCK, WA		
CHECKED	<u> </u>	DRAWING NO.	REV. F	
MFG. APPR.	<u> </u>	D2650	SHEET 3 OF 6	
APPROVED	<u> </u>	TITLE	SCALE	
DE APPR.	<u> </u>	206/407 SKIDTUBE ASSEMBLIES	NTS	
DATE	COPYRIGHT © 1987 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT			
08.08.08				

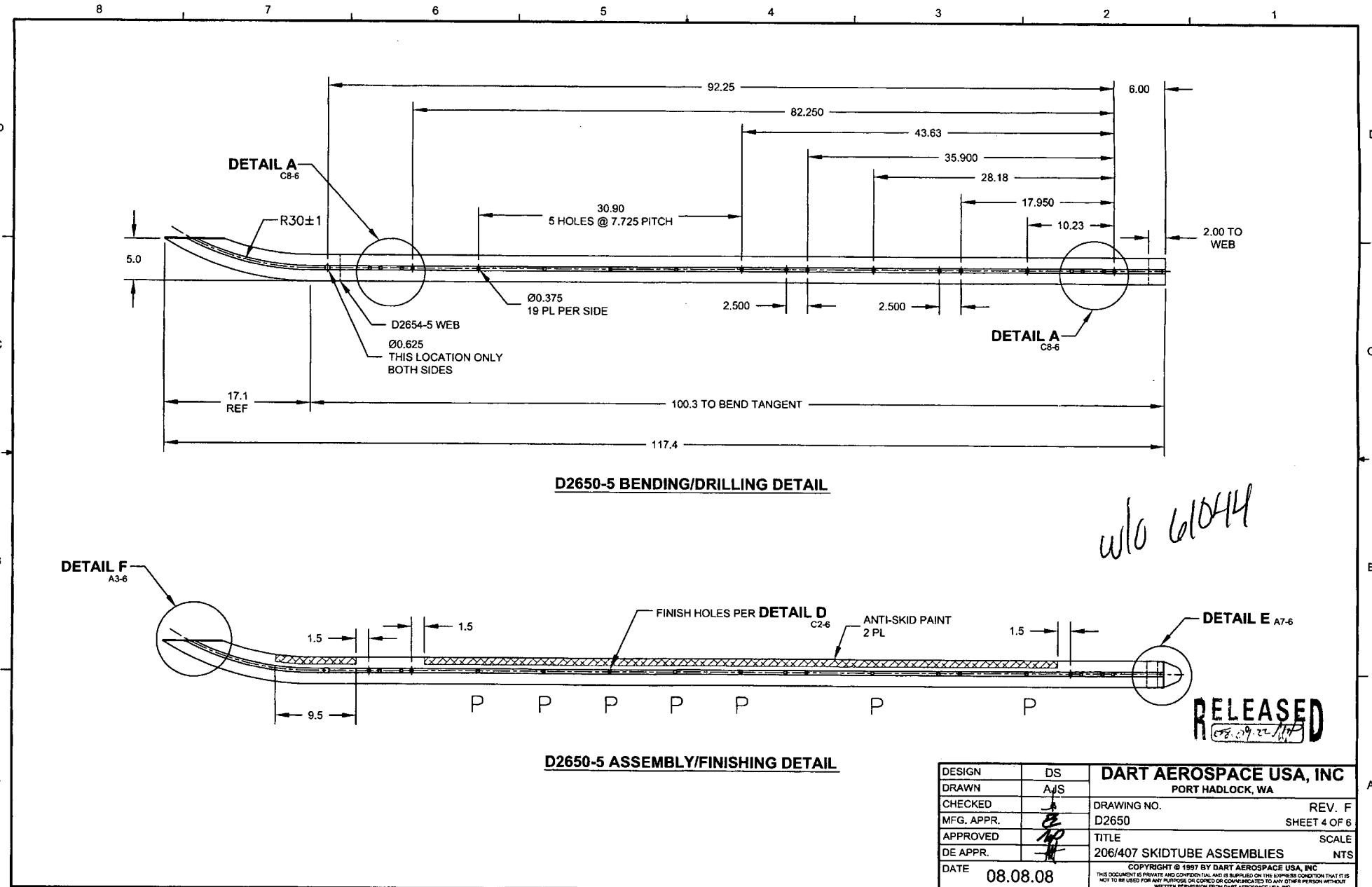
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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NOTE: Date & initial all entries



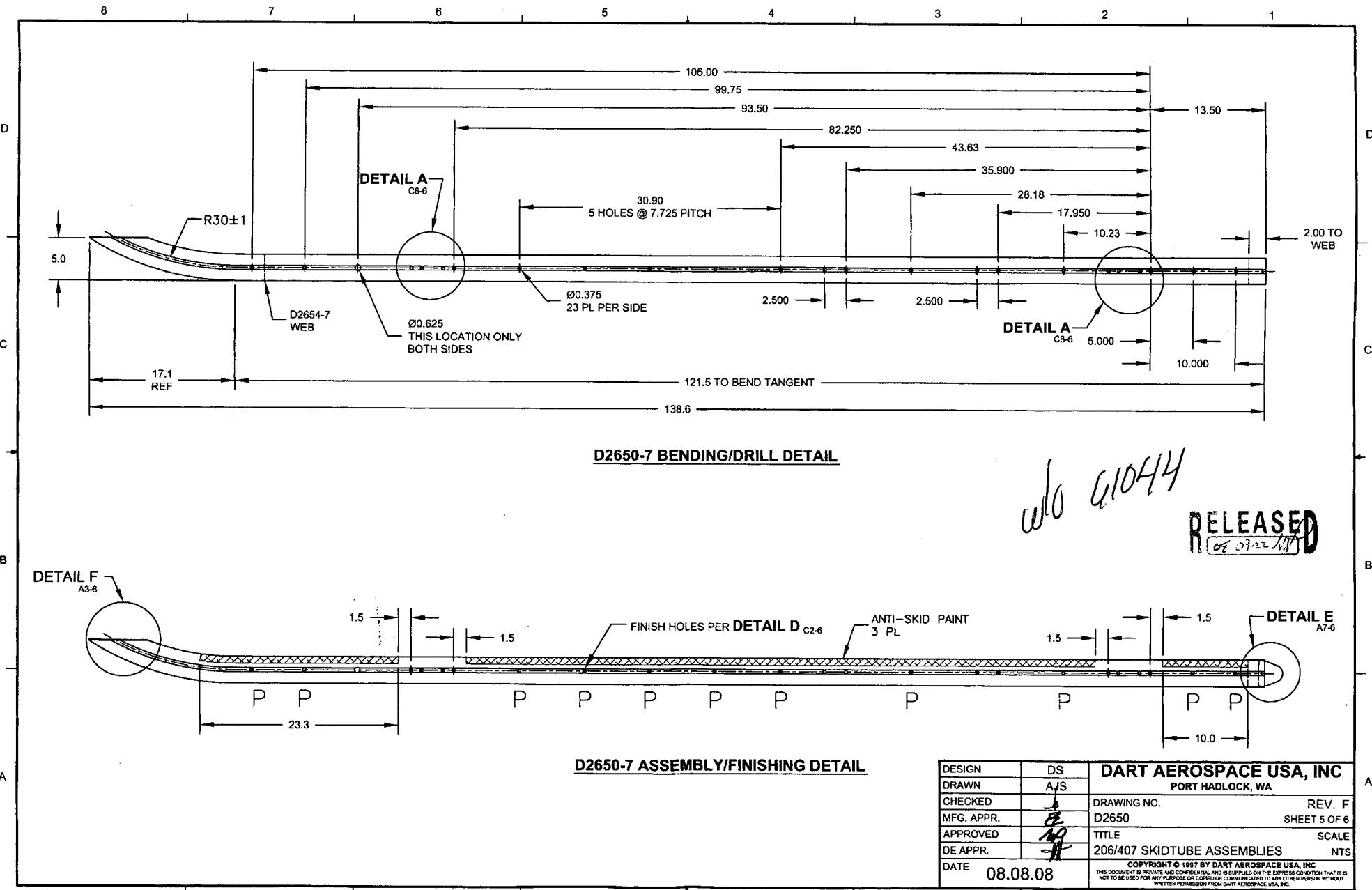
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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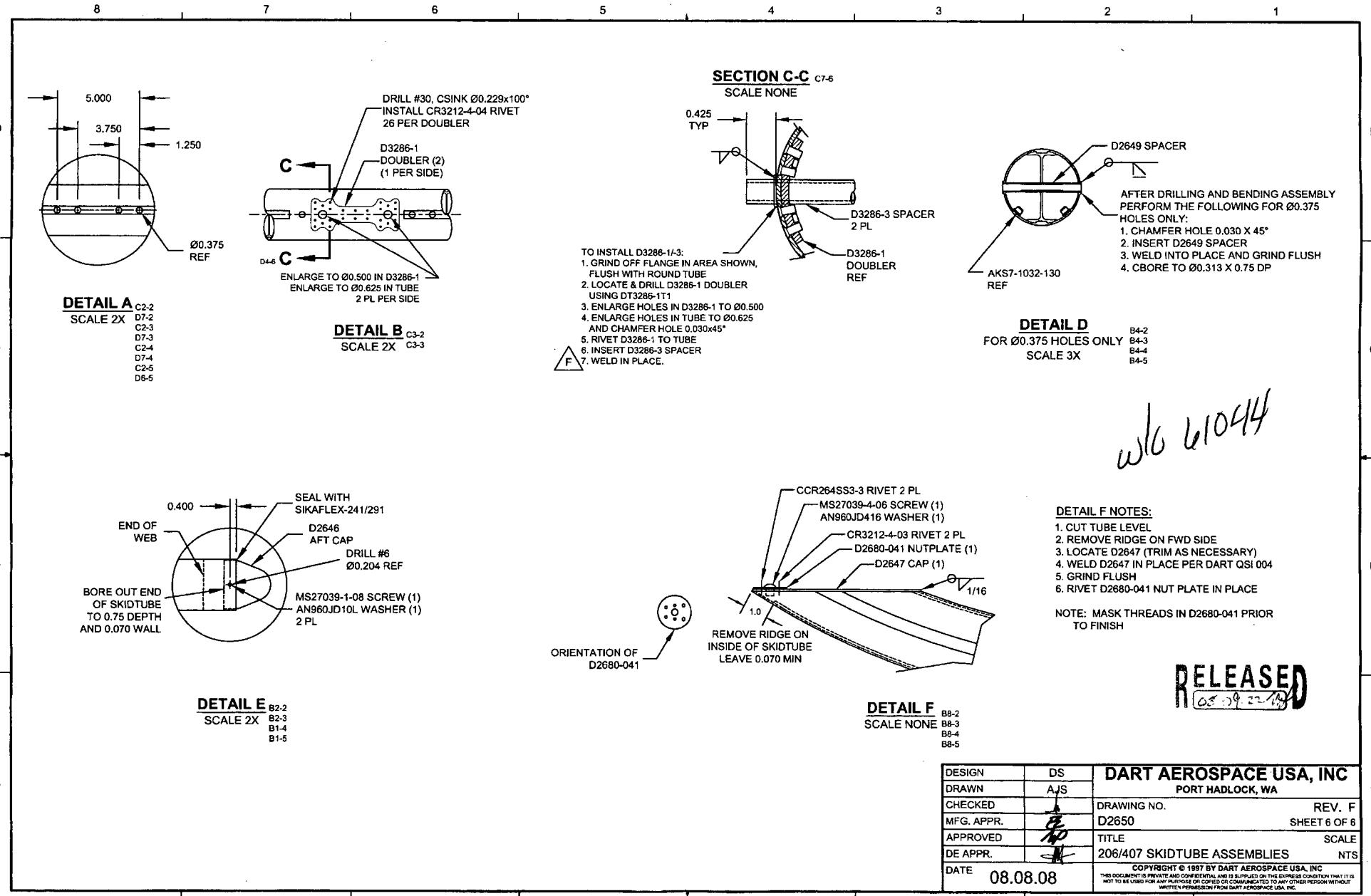
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



RELEASED  
05-09-22 *[Signature]*

DESIGN	DS	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		REV. F	
MFG. APPR.	EE	SHEET 6 OF 6	
APPROVED	AP	TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
DATE	08.08.08	<small>COPYRIGHT © 1997 BY DART AEROSPACE USA, INC.            THIS DOCUMENT IS THE PROPERTY OF DART AEROSPACE USA, INC. IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 235

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Ellsot  
Job number: 59780  
Part number: D206-642-541  
Description: 206 skid tube  
Welding Process: Tig Mig  
Base material: Aluminium  
Current: AC DC

TEST REQUIREMENTS AND RESULTS

Visual: pass  fail   
Penetration: pass  fail

UNACCEPTABLE

Cracks: pass  fail   
Undercut: pass  fail   
Pin holes: pass  fail   
Overlap (cold lap): pass  fail   
Porosity (surface): pass  fail   
Coloration: pass  fail

Qualifier D. D. Ellsot Date of Test Coupon 10.07.01

Welder Barclay Ellsot Date of Test Coupon 10.07.01

The above named individual is qualified in accordance with AWS D17.1.2001 to weld